Xiaoming Zhai

List of Publications by Year
in descending order

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27 papers	814 citations	623734 14 h-index	552781 26 g-index
27 all docs	27 docs citations	27 times ranked	400 citing authors

#	Article	IF	Citations
1	Assessing computational thinking: A systematic review of empirical studies. Computers and Education, 2020, 148, 103798.	8.3	284
2	Applying machine learning in science assessment: a systematic review. Studies in Science Education, 2020, 56, 111-151.	5.4	92
3	Assessing learning in technology-rich maker activities: A systematic review of empirical research. Computers and Education, 2020, 157, 103944.	8.3	41
4	From substitution to redefinition: A framework of machine learningâ€based science assessment. Journal of Research in Science Teaching, 2020, 57, 1430-1459.	3.3	38
5	A Meta-Analysis of Machine Learning-Based Science Assessments: Factors Impacting Machine-Human Score Agreements. Journal of Science Education and Technology, 2021, 30, 361-379.	3.9	32
6	Applying machine learning to automatically assess scientific models. Journal of Research in Science Teaching, 2022, 59, 1765-1794.	3.3	32
7	Practices and Theories: How Can Machine Learning Assist in Innovative Assessment Practices in Science Education. Journal of Science Education and Technology, 2021, 30, 139-149.	3.9	30
8	Developing a Learning Progression of Buoyancy to Model Conceptual Change: A Latent Class and Rule Space Model Analysis. Research in Science Education, 2020, 50, 1369-1388.	2.3	26
9	Understanding How the Perceived Usefulness of Mobile Technology Impacts Physics Learning Achievement: a Pedagogical Perspective. Journal of Science Education and Technology, 2020, 29, 743-757.	3.9	26
10	Using Machine Learning to Score Multi-Dimensional Assessments of Chemistry and Physics. Journal of Science Education and Technology, 2021, 30, 239-254.	3.9	26
11	Evaluation of construct-irrelevant variance yielded by machine and human scoring of a science teacher PCK constructed response assessment. Studies in Educational Evaluation, 2020, 67, 100916.	2.3	23
12	Understanding the relationship between levels of mobile technology use in high school physics classrooms and the learning outcome. British Journal of Educational Technology, 2019, 50, 750-766.	6.3	22
13	Oneâ€toâ€one mobile technology in high school physics classrooms: Understanding its use and outcome. British Journal of Educational Technology, 2018, 49, 516-532.	6.3	21
14	On the Validity of Machine Learning-based Next Generation Science Assessments: A Validity Inferential Network. Journal of Science Education and Technology, 2021, 30, 298-312.	3.9	20
15	Assessing Argumentation Using Machine Learning and Cognitive Diagnostic Modeling. Research in Science Education, 2023, 53, 405-424.	2.3	17
16	Teachersâ€™ use of learning progression-based formative assessment to inform teachersâ€™ instructional adjustment: a case study of two physics teachersâ€™ instruction. International Journal of Science Education, 2018, 40, 1832-1856.	1.9	13
17	Examining the Uses of Student-Led, Teacher-Led, and Collaborative Functions of Mobile Technology and Their Impacts on Physics Achievement and Interest. Journal of Science Education and Technology, 2019, 28, 310-320.	3.9	13
18	Advancing automatic guidance in virtual science inquiry: from ease of use to personalization. Educational Technology Research and Development, 2021, 69, 255-258.	2.8	10

#	Article	IF	Citations
19	Validating a partial-credit scoring approach for multiple-choice science items: an application of fundamental ideas in science. International Journal of Science Education, 2021, 43, 1640-1666.	1.9	9
20	Becoming a teacher in rural areas: How curriculum influences government-contracted pre-service physics teachers' motivation. International Journal of Educational Research, 2019, 94, 77-89.	2.2	8
21	Examining adultsâ€™ web navigation patterns in multi-layered hypertext environments. Computers in Human Behavior, 2022, 129, 107142.	8.5	8
22	Assessing highâ€šchool students' modeling performance on Newtonian mechanics. Journal of Research in Science Teaching, 2022, 59, 1313-1353.	3.3	8
23	Developing effective and accessible activities to improve and assess computational thinking and engineering learning. Educational Technology Research and Development, 0, , 1.	2.8	4
24	Motivating preservice physics teachers to low-socioeconomic status schools. Physical Review Physics Education Research, 2020, 16, .	2.9	3
25	A Framework of Construct-Irrelevant Variance for Contextualized Constructed Response Assessment. Frontiers in Education, 2021, 6, .	2.1	3
26	Examining Humansâ€™ Problem-Solving Styles in Technology-Rich Environments Using Log File Data. Journal of Intelligence, 2022, 10, 38.	2.5	3
27	Re-validating a Learning Progression of Buoyancy for Middle School Students: A Longitudinal Study. Research in Science Education, 2022, 52, 1761-1789.	2.3	2